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SEPTORIA LEAF SPOT OF PHLOX

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Annual phlox (Phlox drummondii Hook) is a popular, easily cultured garden flower which also naturalizes to provide abundant spring roadside and field color in the southeastern United States, and in Texas, its native state (1). Annual phlox thrives on the moist, sandy, well-drained soils common in Florida, and can serve both as a winter annual, and as a spring bedding plant, though plants die during the prolonged hot and humid Florida summers. Phlox plants are not generally available in nurseries and garden centers because transplanting can be difficult; seeds are best sown in place. Among the most troublesome diseases of phlox in Florida are powdery mildew caused by Erysiphe cichoracearum DC., crown and stem rots caused by Rhizoctonia sp. and Sclerotium rolfsii Sacc., and a leaf spot disease caused by Septoria drummondii Ell. and Ev. _? (S. divaricata Ell. and Ev.) (2, 3, 4, 5).

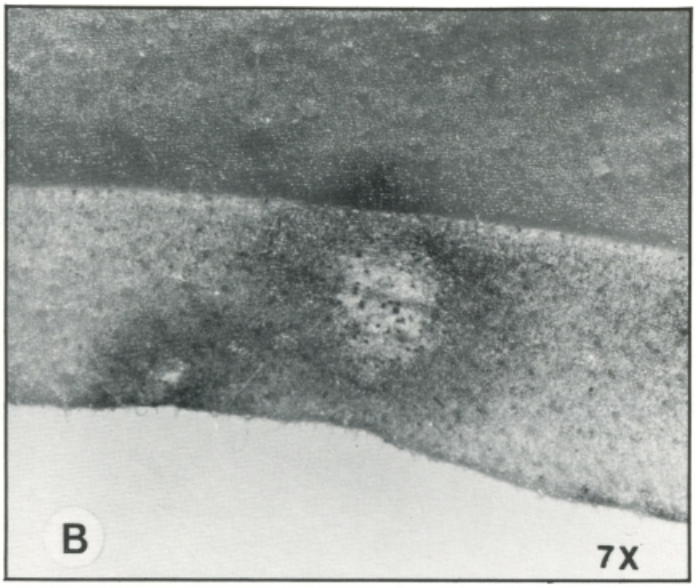

Fig. 1. Septoria leaf spot of phlox. A) Seedling showing dark-bordered leaf spots on lower leaves. B) Close-up view of single leaf spot with dark fruiting bodies (pycnidia) visible in center. (DPI Photos #702954-A-0 and #702954-B-1)

SYMPTOMS AND SIGNS. Septoria leaf spot on phlox initially appears on the lower leaves as light yellow green to light tan circular lesions, 1-10 mm in diameter, with darker borders (Fig. 1A). Even when lesions are young, brown to black specks up to 150u in diameter are visible in the necrotic tissue on both leaf surfaces (Fig. 1B). These specks are pycnidia with wide mouths (ostioles) bearing filiform,

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septate, conidia in a slimy matrix. In wet weather, white tendrils (cirrhi) of conidial masses can be observed protruding from the ostioles. Conidia are disseminated mainly by splashing water. Inoculum persists saprophytically from one season to the next in old infected foliage. If the disease is unchecked, spots coalesce and virtually all of the foliage on a plant can be killed.

CONTROL. Septoria leaf spot apparently progresses in both warm and cool weather, and like most fungal diseases, is favored by moisture. Watering should be done early in the day and in such a way as to minimize foliage wetting. Plants should be grown in full sun to encourage vigorous plant growth and to keep foliage as dry as possible. Badly infected plants and debris from any previous phlox stand should be removed to reduce inoculum. As a preventative, or at the first signs of disease, the following fungicides, all EPA registered for use on Phlox, can be applied: folpet (Phaltan), copper fungicides, triademifon (Bayleton), triforine (Funginex), thiophanate methyl plus zinc ion + maneb complex (Zyban), ferbam, and benomyl (Ben-late) (6).

SURVEY AND DETECTION. Look for phlox seedlings or plants with yellow or necrotic lower leaves. Yellow-green to tan, circular dark-bordered leaf spots up to 1 cm in diameter containing many small dark pycnidia can be found on diseased leaves.

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